

Reply to Final Office Action of December 21, 2004

Appl. No.: 09/785,884

Amendment Dated: February 17, 2005

Attorney Docket No.: CSCO-002/94701

**REMARKS**

5 Claims 1-58 were examined in the outstanding final office action mailed on December 21, 2004 (hereafter "First Final Office Action"). Claims 59-66 are sought to be added by virtue of the foregoing amendments. The additions are believed not to introduce new matter, and their entry is respectfully requested. Claims 1-66 are thus presented for consideration.

10 Applicants again thank Examiners Barot and Lesniewski for providing the opportunity to conduct the telephone interview on February 17, 2005. Some of the remarks below were discussed and there was agreement that claim 1 is allowable over the art of record. It was further agreed that the Examiner would complete interview summary form PTOL-413, and that the applicants need not provide a summary of the interview. It is respectfully requested that a copy of the completed form PTOL-413 be mailed to the address of record, if one has not been mailed already. Reconsideration is requested further in view of the following  
15 remarks.

Claims 1-4, 8-10, 14-16, 21-23, 25, 29, 30, 35-40, 42, and 46-50 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Number 6,105,064 issued to Davis et al. (Hereafter 'Davis'). Claims 5-7, 11, 13, 17-19, 24, 26, 28, 31, 32, 34, 41, 43, and 45 were rejected under 35 U.S.C. 103(a) as being unpatentable over Davis in view of U.S. Patent  
20 Number 5,964,837 issued to Chao *et al* ('Chao'). Claims 51-58 were rejected under 35 U.S.C. 102(e) as being anticipated by Davis.

Withdrawal of the final rejections, and continuation of examination is respectfully requested in view of the following remarks.

25 It is asserted that Davis does not disclose or suggest several features of independent claim 1. The basis for the assertion is explained now. Independent claim 1 recites in relevant parts:

30 1. A method of processing a plurality of keep-alive messages *generated by a corresponding plurality of end systems*, each of said plurality of keep-alive messages being designed to request the status of a corresponding point to point (PPP) session implemented on a communication network, said method comprising:

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5                    *receiving in an aggregation device* said plurality of keep-alive messages;  
                     generating *in said aggregation device an aggregated request packet*  
                     which indicates that the status of said PPP sessions is requested; and  
                     sending said aggregated request packet on said communication network  
                     to a peer aggregation device.  
                     (Previously presented claim 1, *Emphasis Added*)

10                   Thus, in a method according to claim 1, each keep-alive message is generated by a  
                     corresponding end system, i.e., there are multiple (and different) end systems which generate the  
                     keep-alive messages. An aggregation device receives the keep-alive messages (from different  
                     end systems) and generates an aggregated request packet which indicates that the status of the  
                     PPP sessions is requested. The aggregated request packet is then sent on a communication  
                     network to a peer aggregation device.

15                   In sharp contrast, Davis does not disclose aggregation of keep-alive messages generated  
                     by different end systems at least for reasons noted below. In this regard, it is first noted that  
                     Davis is directed to "placing packets on network for transmission from *sending endnode* to  
                     *receiving endnode* at times which are determined by window size and metering interval" (from  
                     the Title of Davis, *Emphasis Added*).

20                   In other words, the teachings of Davis are related to communication between two end  
                     nodes only (i.e., point to point communication), and any aggregation is believed to be related to  
                     communication from/to a single end node. In particular, Davis teaches:

25                   To avoid unnecessary ack packets, *acks are bundled together* and piggybacked  
                     on returning data packets when appropriate. The invention provides control even if the  
                     address of an endnode changes. The invention also supports *multiplexing several logical*  
                     *connections over a single transport session* and *combining data from several*  
                     *connections in a single packet*, as well as construction of packets in a  
                     network-layer-independent format.  
                     (Lines 11-end of Abstract of Davis, *Emphasis Added*)

30                   The acks described as being bundled, are believed to be to/of the same endnode at the  
                     other end. The transport session is also believed to be to a single end node, and the logical  
                     connections are also believed to be destined to a single end node. In support of such an argument  
                     applicant points to the below text of Davis (also relied by the Examiner in page 3, paragraph 7  
                     of the First Final Office Action):

                     The term "session" refers to a guaranteed delivery communication channel set up

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between *the two endnodes* 32 and 34. Data from many connections can be multiplexed over the *same session*.

...

5       The *term "connection"* refers to the communications channel established between a service *on one endnode* and a corresponding service *on another endnode*. It is possible for the same service to set up several connections which can be used for sending different types of data, or sending data at different priorities between the endnodes. It is also possible for services to set up multiple connections to several different endpoints at the same time.

10       (Lines 14-30 Column 9 of Davis, *Emphasis Added*)

Accordingly, Davis does not disclose or suggest several features of independent claim 1. Withdrawal of the rejections with respect to claim 1 is respectfully requested. Claims 2-9 and 51 are also allowable at least as being dependent from an allowable base claim 1.

15       Claim 2 is believed to be independently allowable for the following reasons. Claim 2 recites in relevant parts:

receiving *said aggregated request packet* in *said peer aggregation device*,  
*indicating the status of said plurality of sessions in an aggregated reply*  
*packet*; and

20       sending *said aggregated reply packet* to *said aggregation device*.  
(Pending claim 2, *Emphasis Added*)

Thus, in accordance with the method of claim 2, a peer aggregation device indicates the status of the session in an aggregated reply packet and sends the reply packet to the aggregation device (introduced in claim 1). Thus, the method of claim 2 recites two aggregation devices (in addition to the end systems recited in claim 1, by claim construction).

25       As noted above with respect to claim 1, the communications of Davis relate to between two endnodes only. Accordingly, claim 2 is also independently allowable over Davis.

Claim 59 is also independently allowable at least as reciting that the aggregation device is physically separate from the end systems. Claims 11-50, 52-58 and 59-66 are also allowable at least for some of the reasons noted above.

30       Therefore, Applicant respectfully submits that all the objections/rejections of record are believed to be overcome, and all the claims presented for consideration are allowable over the art of record. Withdrawal of the final rejection is accordingly respectfully requested.

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The Examiner is invited to telephone the undersigned representative if it is believed that an interview might be useful for any reason.

Respectfully submitted,

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